

## ABSTRACT

A waveguide Bragg grating (WBG) is apodized by varying the duty cycle of selected grating periods while fixing the pitch of the grating periods. In one embodiment, the WBG is implemented in a silicon substrate using polysilicon filled trenches of varying width while keeping the grating periods' pitch constant. The polysilicon trenches are formed so that if the width of one trench is increased compared to an adjacent grating period, the trench width in the other adjacent grating period (if present) is decreased.